

Mineral Industry Surveys

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SULFUR IN AUGUST 2006

During the month, production of recovered elemental sulfur was 736,000 metric tons (t), according to the U.S. Geological Survey. August 2006 production was 3% higher than that of July 2006 and 9% lower than that of August 2005. Shipments were 4% higher than those of July 2006. Producers' ending stocks for August 2006 were 181,000 t.

Sulfur production was significantly lower than it was in August 2005. Sulfur production at petroleum refineries has nearly recovered to the level experienced before two major hurricanes struck the Gulf Coast in August and September 2005, but major upgrades at BP p.l.c.'s Texas City, TX, refinery have limited sulfur production there while the sulfur recovery units are being refurbished (North American Sulphur Review, 2006). Acid gas reinjection at a large natural gas operation in Wyoming and decreased production at other operations reduced sulfur production from gas processing by 27% from that of August 2005. Production from refineries is expected to continue to

increase, but recovery from natural gas operations is not predicted to increase significantly.

Import and export data for August 2006 were not available at the time of publication and will be published in the Sulfur in September 2006 Mineral Industry Surveys along with apparent consumption. Imports of recovered sulfur for July 2006 were estimated to be 286,000 t; exports were 79,000 t. Imports of sulfuric acid for July 2006 were 228,000 t; exports were 18,000 t.

Significant adjustments have been made to the sulfur import data. Reports from the U.S. Census Bureau appear to underreport sulfur imports, especially material from Canada. The revised figures are based on Census information and data from personal communications with industry experts.

Reference Cited

North American Sulphur Review, 2006, Supply: North American Sulphur Review, v. 17, no. 9, September, p. 3.

TABLE 1
SALIENT SULFUR STATISTICS¹

(Thousand metric tons)

Period	Production			Shipments, all sources	Ending stocks ³
	Petroleum ²	Natural gas	Total		
2005:					
January-December	6,940	1,810	8,750	8,720	XX
January-August	4,820	1,280	6,100	6,080	XX
August	647	163	811	812	175
September	489	141	630	634	165
October	478	136	614	614	158
November	555	129	683	671	167
December	593	120	714	721	156
2006:					
January	572	114	686	677	160
February	513	114	627	632	151
March	544	112	656	660	142
April	552	120	672	654	161
May	593	119	712	703	161
June	586	96	682	694	146
July	599 ^r	118	718 ^r	693 ^r	169 ^r
August ^p	617	119	736	721	181
Total	4,580	913	5,490	5,440	XX

^pPreliminary. ^rRevised. XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes a small quantity from coking operations.

³Subject to inventory adjustments.

TABLE 2
U.S. IMPORTS OF SULFUR¹

(Thousand metric tons and thousand dollars)

Period	Canada		Mexico		Venezuela		Total, all countries ²	
	Quantity ^e	Value ³	Quantity	Value ³	Quantity ^e	Value ³	Quantity ^e	Value ³
2005:								
January-December	1,970	33,500	427	18,600	409	16,800	2,820	70,500
January-July	1,090	16,100	261	11,300	239	9,260	1,640	37,100
July	170	2,650	40	1,490	38	1,440	218	5,610
August	170	2,820	20	808	31	1,280	221	5,040
September	160	3,020	39	1,600	41	1,670	241	6,360
October	185	3,570	44	1,900	37	1,620	227	7,770
November	180	3,680	29	1,130	20	819	233	5,710
December	185	4,360	34	1,890	41	2,180	261	8,500
2006:								
January	165	4,190	58	2,520	37	1,680	260	8,460
February	150	3,910	43	1,810	40	1,650	233	7,450
March	165	3,970	44	2,010	34	1,580	243	7,690
April	205	4,290	29	1,420	30	1,410	264	7,230
May	210	3,260	29	1,390	19	925	259	5,820
June	205	2,550	44	1,970	29	1,270	281	6,120
July	210	2,370	43	1,900	33	1,370	286	5,730
Total	1,310	24,500	290	13,000	222	9,880	1,830	48,500

^eEstimated.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include other countries not listed.

³Declared customs valuation.

Sources: U.S. Census Bureau data as adjusted by U.S. Geological Survey and PentaSul North America Sulphur Service.

TABLE 3
U.S. IMPORTS OF SULFURIC ACID¹

(Thousand metric tons and thousand dollars)

Period	Canada			Mexico			Total, all countries ²		
	Quantity	Sulfur content	Value ³	Quantity	Sulfur content	Value ³	Quantity	Sulfur content	Value ³
2005:									
January-December	2,000	656	80,700	398	129	7,920	2,660	871	102,000
January-July	1,190	391	45,600	218	71	4,040	1,560	511	56,800
July	168	55	6,840	9	3	187	213	70	7,790
August	156	51	6,490	19	6	350	196	64	9,150
September	169	55	6,890	35	11	626	241	79	8,260
October	178	58	7,880	60	20	1,730	253	83	11,600
November	138	45	5,910	38	12	674	181	59	6,820
December	172	56	7,910	28	9	504	229	75	9,640
2006:									
January	194	63	7,800	16	5	444	244	80	9,030
February	161	53	6,550	23	7	416	201	66	7,670
March	198	65	7,760	19	6	454	255	83	9,050
April	207	68	7,910	16	5	400	234	77	9,100
May	207	68	7,840	13	4	307	229	75	8,320
June	189	62	7,030	2	1	56	208	68	7,860
July	181	59	6,290	7	2	157	228	74	6,900
Total	1,340	437	51,200	96	31	2,230	1,600	523	57,900

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include other countries not listed.

³Declared customs valuation.

Source: U.S. Census Bureau.

TABLE 4
U.S. EXPORTS OF SULFUR AND SULFURIC ACID¹

(Thousand metric tons and thousand dollars)

Period	Sulfur		Sulfuric acid		
	Quantity	Value ²	Quantity	Sulfur content	Value ²
2005:					
January-December	683	55,900	338	108	29,500
January-July	365	31,300	211	68	17,500
July	64	4,520	24	8	1,920
August	71	5,330	25	8	2,600
September	42	3,470	26	8	2,810
October	104	7,070	32	10	3,020
November	14	2,940	7	2	992
December	87	5,790	37	12	2,560
2006:					
January	55	4,440 ^r	14	4	1,400
February	15	1,910 ^r	38	12	2,400
March	68	4,720 ^r	23	8	2,010 ^r
April	11	1,280 ^r	19	6	1,600 ^r
May	19	2,100 ^r	17	5	1,400
June	141 ^r	8,800 ^r	11	4	1,370 ^r
July	79	4,560	18	6	2,030
Total	388	27,800	139	45	12,200

^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Declared f.a.s. (free alongside ship) valuation.

Source: U.S. Census Bureau.

TABLE 5
U.S. CONSUMPTION OF SULFUR¹

(Thousand metric tons)

Period	Domestic sources ²	Imports ^c	Consumption
2005:			
January-December	8,060	2,790	10,900
January-July	4,910	1,640	6,540
July	712	218	930
August	741	221	962
September	592	241	833
October	510	227	737
November	657	233	890
December	634	261	895
2006:			
January	622	260	882
February	617	233	850
March	592	243	835
April	643	264	907
May	684	259	943
June	553 ^r	281	834 ^r
July	614	286	900
Total	4,330	1,830	6,150

^cEstimated. ^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Calculated as shipments minus exports.

TABLE 6
RECOVERED SULFUR PRODUCED AND SHIPPED IN THE UNITED STATES,
BY PAD (PETROLEUM ADMINISTRATION FOR DEFENSE) DISTRICT¹

(Thousand metric tons)

District and source	August 2006 ^p		July 2006		January - August 2006 ²		January - August 2005 ²	
	Production	Shipments	Production	Shipments	Production	Shipments	Production	Shipments
PAD 1:								
Petroleum and coke	21	20	21	20	160	159	168 ^r	168 ^r
Natural gas	1	1	2	2	11	11	13 ^r	13 ^r
Total	23	21	23	21	171	171	181 ^r	181 ^r
PAD 2:								
Petroleum and coke	94	95	89	89	685	688	710 ^r	711 ^r
Natural gas	4	4	3	3	26	26	27	27 ^r
Total	97	99	93	91	711	714	737 ^r	738 ^r
PAD 3: ³								
Petroleum and coke	389	371	374 ^r	360 ^r	2,830	2,800	3,040 ^r	3,050 ^r
Natural gas	39	40	39	40 ^r	297	299	334	336
Total	427	410	413 ^r	400 ^r	3,130	3,100	3,370 ^r	3,380 ^r
PAD 4 and 5: ⁴								
Petroleum and coke	114	112	116	109	898	868	907 ^r	880 ^r
Natural gas	76	78	74	71	579	582	908 ^r	901 ^r
California	92	91	95	89	734	707	719 ^r	690 ^r
Total	189	191	189	180	1,480	1,450	1,810 ^r	1,780 ^r
Grand total	736	721	718 ^r	693 ^r	5,490	5,440	6,100 ^r	6,080 ^r

^pPreliminary. ^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include revisions.

³Includes the U.S. Virgin Islands.

⁴Quantities produced and shipped in California included in petroleum and natural gas. California total shown for information purposes only.

TABLE 7
COMPARATIVE SULFUR AND SULFURIC ACID STATISTICS¹

(Million metric tons per year [annualized basis] and dollars per metric ton for period shown)

	2006			2005
	August	July	Total	total
Production	8.67 ^p	8.45 ^r	8.25 ^r	8.75
Shipments	8.49 ^p	8.16 ^r	8.17 ^r	8.72
Exports of sulfur	NA	0.93	0.67	0.58
Imports of sulfur:				
Canada	NA	2.47 ^e	2.26 ^e	1.97 ^e
Mexico	NA	0.51	0.50	0.45
Venezuela	NA	0.39 ^e	0.38 ^e	0.41 ^e
Total ²	NA	3.37 ^e	3.14 ^e	2.79 ^e
Exports of H ₂ SO ₄	NA	0.21	0.24	0.31
Imports of H ₂ SO ₄ :				
Canada	NA	2.13	2.30	1.87
Mexico	NA	0.08	0.17	0.40
Total ²	NA	2.68	2.75	2.66
Consumption: ³				
Domestic sources	NA	7.23	7.45	8.06
Imports	NA	3.37 ^e	3.14 ^e	2.79 ^e
Total	NA	10.60	10.59	10.85
Sulfur export values ⁴	NA	58	72	84
Sulfur import values: ⁴				
Canada	NA	11	19	17
Mexico	NA	44	45	41
Venezuela	NA	42	45	41
Average ²	NA	20	27	25
H ₂ SO ₄ export values ⁴	NA	113	88	86
H ₂ SO ₄ import values: ⁴				
Canada	NA	35	38	40
Mexico	NA	22	23	20
Average ²	NA	30	36	37

^eEstimated. ^pPreliminary. ^rRevised. NA Not available.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes other countries not listed.

³Because August trade data were not available, August consumption was not determined.

⁴Average value per ton for most recent data available.